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Figure 3:

Clustal W alignment of predicted amino acid sequences of SCS0009 with SV1 and SV2

```

SCS0009      -----MPSGCRCLHLVCLLCILGAPGQPVRA##
SV1-ORF      -----
SV2-ORF      -----

SCS0009      #
              DDCSSHCDLAHGCCAPDGSCRCDFGWEGLHCERCVRMPGCQHGTCHQWPWCICHSGWAGK
SV1-ORF      -----MPGCQHGTCHQWPWCICHSGWAGK
SV2-ORF      -----MPGCQHGTCHQWPWCICHSGWA--
              *****

SCS0009      #              #              ##
              FCDK-----GFHGRDCERKAGPCEQAGSPCRNGG
SV1-ORF      FCDKDEHICTTQSPCQNGGQCMYDGGGEYHCVCLPGFHGRDCERKAGPCEQAGSPCRNGG
SV2-ORF      ---DEHICTTQSPCQNGGQCMYDGGGEYHCVCLPGFHGRDCERKAGPCEQAGSPCRNGG
              *****

SCS0009      QCQDDQGFAFNFTCRCLVGFVGARCEVNVDDCLMRPCANGATCLDGINRFSCLCPEGFAG
SV1-ORF      QCQDDQGFAFNFTCRCLVGFVGARCEVNVDDCLMRPCANGATCLDGINRFSCLCPEGFAG
SV2-ORF      QCQDDQGFAFNFTCRCLVGFVGARCEVNVDDCLMRPCANGATCLDGINRFSCLCPEGFAG
              *****

SCS0009      RFCTINLDDCASRPCQRGARCRDRVHDFDCLCPSGYGKTCCELVLVPDPPTTVDTPPLGP
SV1-ORF      RFCTINLDDCASRPCQRGARCRDRVHDFDCLCPSGYGKTCCELVLVPDPPTTVDTPPLGP
SV2-ORF      RFCTINLDDCASRPCQRGARCRDRVHDFDCLCPSGYGKTCCELVLVPDPPTTVDTPPLGP
              *****

SCS0009      TSAVVVPATGFAPHSAGAGLLRISVKEVVRQEAGLGEPSLVALVVFALTAALVLATVL
SV1-ORF      TSAVVVPATGFAPHSAGAGLLRISVKEVVRQEAGLGEPSLVALVVFALTAALVLATVL
SV2-ORF      TSAVVVPATGFAPHSAGAGLLRISVKEVVRQEAGLGEPSLVALVVFALTAALVLATVL
              *****

SCS0009      LTLRAWRRGVCPPGPCCYPAPHYAPACQDQECQVSMLEAGLPLPRDLPPPEPGKTTAL.
SV1-ORF      LTLRAWRRGVCPPGPCCYPAPHYAPACQDQECQVSMLEAGLPLPRDLPPPEPGKTTAL.
SV2-ORF      LTLRAWRRGVCPPGPCCYPAPHYAPACQDQECQVSMLEAGLPLPRDLPPPEPGKTTAL.
              *****

```

above amino acids XY = exon boundaries.

In the translation, the SV1 and SV2 sequences are shown representing the longest ORF available.

The predicted signal peptide of SCS0009 is ~~shown highlighted in yellow underlined.~~

The SV1 and SV2 longest ORFs do not contain predicted signal peptides.

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Figure 3:

Clustal W alignment of precited amino acid sequences of SCS0009 with SV1 and SV2

```

SCS0009          -----MPSGCRCLHLVCLLCILGAPGQPVRA      ##
SV1-ORF          -----
SV2-ORF          -----

SCS0009          #
                  DDCSSHCDLAHGCCAPDGSRCRDPGWEGLHCERCVRMPGCQHGTCHQPWQCICHSGWAGK
SV1-ORF          -----MPGCQHGTCHQPWQCICHSGWAGK
SV2-ORF          -----MPGCQHGTCHQPWQCICHSGWA--
                  *****

SCS0009          #          #          ##
                  FCDK-----GFHGRDCERKAGPCEQAGSPCRNGG
SV1-ORF          FCDKDEHICTTQSPCQNGGQCMYDGGGEYHCVCLPGFHGRDCERKAGPCEQAGSPCRNGG
SV2-ORF          ---DEHICTTQSPCQNGGQCMYDGGGEYHCVCLPGFHGRDCERKAGPCEQAGSPCRNGG
                  *****

SCS0009          QCQDDQGGFALNFTCRCLVGFVGARCEVNVDDCLMRPCANGATCLDGINRFSCLCPEGFAG
SV1-ORF          QCQDDQGGFALNFTCRCLVGFVGARCEVNVDDCLMRPCANGATCLDGINRFSCLCPEGFAG
SV2-ORF          QCQDDQGGFALNFTCRCLVGFVGARCEVNVDDCLMRPCANGATCLDGINRFSCLCPEGFAG
                  *****

SCS0009          RFCTINLDDCASRPCQRGARCRDRVHDFDCLCPSGYGGKTCELVLPVPDPPTTVDTPLGP
SV1-ORF          RFCTINLDDCASRPCQRGARCRDRVHDFDCLCPSGYGGKTCELVLPVPDPPTTVDTPLGP
SV2-ORF          RFCTINLDDCASRPCQRGARCRDRVHDFDCLCPSGYGGKTCELVLPVPDPPTTVDTPLGP
                  *****

SCS0009          TSAVVVPATGPAPHSAGAGLLRISVKEVVRRQEAGLGEPSLVALVVFGALTAALVLATVL
SV1-ORF          TSAVVVPATGPAPHSAGAGLLRISVKEVVRRQEAGLGEPSLVALVVFGALTAALVLATVL
SV2-ORF          TSAVVVPATGPAPHSAGAGLLRISVKEVVRRQEAGLGEPSLVALVVFGALTAALVLATVL
                  *****

SCS0009          LTLRAWRRGVCPPGPCCYPAPHYAPACQDQECQVSMLPAGLPLPRDLPPPEPGKTAL.
SV1-ORF          LTLRAWRRGVCPPGPCCYPAPHYAPACQDQECQVSMLPAGLPLPRDLPPPEPGKTAL.
SV2-ORF          LTLRAWRRGVCPPGPCCYPAPHYAPACQDQECQVSMLPAGLPLPRDLPPPEPGKTAL.
                  *****

```

above amino acids = exon boundaries.

In the translation, the SV1 and SV2 sequences are shown representing the longest ORF available.

The predicted signal peptide of SCS0009 is underlined.

The SV1 and SV2 longest ORFs do not contain predicted signal peptides.

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Figure 23

Nucleotide sequence with translation of SCS0009-SV5 PCR product indicating the positions of the SCS0009-AP1, -AP2, -AP3 and -AP4 primers used to generate the SCS0009 sequence.

```

                                SCS0009-AP1
1  tccatccgtc cgtccctcct ggggcccggcg ctgaccatgc ccagcggctg ccgctgcctg
                                m p s g c r c l

61  catctcgtgt gcctgttgtg cattctgggg gctcccggtc agcctgtccg agccgatgac
    h l v c l l c i l g a p g q p v r a d d

121 tgcagctccc actgtgacct ggcccacggc tgctgtgcac ctgacggctc ctgcaggtgt
    c s s h c d l a h g c c a p d g s c r c

181 gaccggggtt gggaggggct gcaactgtgag cgtgtgtgta ggatgcctgg ctgccagcac
    d p g w e g l h c e r c v r m p g c q h

241 ggtacctgcc accagccatg gcagtgcata tgccacagtg gctggggcagg caagttctgt
    g t c h q p w q c i c h s g w a g k f c
                                SCS0009-AP2
301 gacaaagatg aacatatctg taccacgcag tccccttgcc agaatggagg ccagtgcattg
    d k d e h i c t t q s p c q n g g q c m

                                SCS0009-AP3
361 tatgacgggg gcggtgagta ccattgtgtg tgcttaccag gcttccatgg gcgtgactgc
    y d g g g e y h c v c l p g f h g r d c

421 gagcgcaagg ctggaccctg tgaacaggca ggctcccatg gccgcaatgg cgggcagtgc
    e r k a g p c e q a g s p c r n g g q c

481 caggacgacc agggctttgc tctcaacttc acgtgccgct gcttggtggg ctttgtgggt
    q d d q g f a l n f t c r c l v g f v g

541 gcccgctgtg aggtaaatgt ggatgactgc ctgatgcggc cttgtgctaa cggtgccacc
    a r c e v n v d d c l m r p c a n g a t

601 tgccttgacg gcataaacg cttctcctgc ctctgtcctg agggctttgc tggacgcttc
    c l d g i n r f s c l c p e g f a g r f

661 tgcaccatca acctggatga ctgtgccagc cgcccatgcc agagaggggc ccgctgtcgg
    c t i n l d d c a s r p c q r g a r c r

721 gaccgtgtcc acgaattcga ctgcctctgc ccagtggtt atggtggcaa gacctgtgag
    d r v h d f d c l c p s g y g g k t c e

781 cttgtotttac ctgtcccaga ccccccaacc acagtggaca cccctctagg gccacctca
    l v l p v p d p p t t v d t p l g p t s
  
```

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841 gctgtagtgg tacctgccac ggggccagcc cccacagcg caggggctgg tctgctgagg
 a v v v p a t g p a p h s a g a g l l r
 901 atctcagtga aggaggtggt gcggaggcaa gaggtgggc taggtgagcc tagcttggtg
 i s v k e v v r r q e a g l g e p s l v
 961 gccctggtgg tgtttggggc cctcactgct gccctggttc tggctactgt gttgctgacc
 a l v v f g a l t a a l v l a t v l l t
 1021 ctgagggcct ggcgccgggg tgtctgcccc cctggaccct gttgctaccc tgccccacac
 l r a w r r g v c p p g p c c y p a p h
 1081 tatgctccag cgtgccagga ccaggagtgt caggttagca tgctgccagc agggctcccc
 y a p a c q d q e c q v s m l p a g l p
 1141 ctgccacgtg acttgccccc tgagcctgga aagaccacag cactgtgatg gaggtgggg
 l p r d l p p e p g k t t a l

←
 SCS0009-AP4

Underlined Sequence (positions 308-400) ~~in grey~~ = bases not present in
 SCS0009 prediction

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Figure 23

Nucleotide sequence with translation of SCS0009-SV5 PCR product indicating the positions of the SCS0009-AP1, -AP2, -AP3 and -AP4 primers used to generate the SCS0009 sequence.

```

                                SCS0009-AP1
1  tccatccgtc cgtccctcct ggggcgggog ctgaccatgc ccagcggctg ccgctgcctg
                                m p s g c r c l

61  catctcgtgt gctgtttgtg cattctgggg gctcccggtc agcctgtccg agccgatgac
    h l v c l l c i l g a p g q p v r a d d

121 tgcagctccc actgtgacct ggcccacggc tgetgtgcac ctgacggctc ctgcaggtgt
    c s s h c d l a h g c c a p d g s c r c

181 gaccggggct gggaggggct gcaactgtgag cgctgtgtga ggatgcctgg ctgccagcac
    d p g w e g l h c e r c v r m p g c q h

241 ggtacctgcc accagccatg gcagtgcacg tggcacagtg gctgggcagg caagttctgt
    g t c h q p w q c i c h s g w a g k f c
                                SCS0009-AP2
301 gacaaagatg aacatatctg taccacgcag tccccctgcc agaatggagg ccagtgcattg
    d k d e h i c t t q s p c q n g g q c m

                                SCS0009-AP3
361 tatgacgggg gcggtgagta ccattgtgtg tgottaccag gottccatgg gcgtgactgc
    y d g g g e y h c v c l p g f h g r d c

421 gagcgcaagg ctggaccctg tgaacaggca ggctcccatg gccgcaatgg cgggcagtgc
    e r k a g p c e q a g s p c r n g g q c

481 caggacgacc agggctttgc tctcaacttc acgtgccgct gcttggtggg ctttgtgggt
    q d d q g f a l n f t c r c l v g f v g

541 gcccgctgtg aggtaaatgt ggatgactgc ctgatgcggc cttgtgctaa cggtgccacc
    a r c e v n v d d c l m r p c a n g a t

601 tgccttgacg gcataaacgg cttctcctgc ctctgtcctg agggctttgc tggacgcttc
    c l d g i n r f s c l c p e g f a g r f

661 tgcaccatca acctggatga ctgtgccagc cgcccatgcc agagaggggc ccgctgtcgg
    c t i n l d d c a s r p c q r g a r c r

721 gacogtgtcc acgacttcga ctgcctctgc ccagtggtt atggtggcaa gacctgtgag
    d r v h d f d c l c p s g y g g k t c e

781 cttgtottac ctgtcccaga ccccccaacc acagtgagaca cccctctagg gccacctca
    l v l p v p d p p t t v d t p l g p t s

```

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```

841  gctgtagtgg tacctgccac ggggccagcc cccacagcg caggggctgg tetgetgogg
      a v v v p a t g p a p h s a g a g l l r

901  atctcagtga aggaggtggt gcggaggcaa gaggtgggc taggtgagcc tagcttggtg
      i s v k e v v r r q e a g l g e p s l v

961  gccctgggtg tgtttggggc cctcactgct gccctgggtc tggctactgt gttgctgacc
      a l v v f g a l t a a l v l a t v l l t

1021 ctgagggcct ggcgccgggg tgtctgcccc cctggaccct gttgctaccc tgccccacac
      l r a w r r g v c p p g p c c y p a p h

1081 tatgtccag cgtgccagga ccaggagtgt caggtagca tgctgccagc agggctcccc
      y a p a c q d q e c q v s m l p a g l p

1141 ctgccacgtg acttgccccc tgagcctgga aagaccacag cactgtgatg gaggtgggg
      l p r d l p p e p g k t t a l

```

← SCS0009-AP4

Underlined Sequence (positions 308-400)= bases not present in SCS0009 prediction